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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,252	10/27/2003	Norman C. Fawley	59910P003	4350

8791 7590 06/15/2009

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EXAMINER

BUTLER, PATRICK NEAL

ART UNIT	PAPER NUMBER
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1791

MAIL DATE	DELIVERY MODE
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06/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Response to Arguments

Applicant's arguments filed 01 June 2009 have been fully considered but they are not persuasive.

Applicant argues with respect to the 35 U.S.C. § 112, first paragraph, rejections. Applicant's arguments appear to be on the grounds that:

1) Applicant's amendment to Claim 1 obviates the U.S.C. § 112, first paragraph, rejections since it does not recite having a heater at multiple locations.

Applicant argues with respect to the 35 U.S.C. § 103(a) rejections. Applicant's arguments appear to be on the grounds that:

2) Although Smith teaches a composite reinforced pipe, it is unclear that the composite reinforced pipe includes resin and reinforced fibers as claimed.

3) No motivation for $\frac{1}{4}^\circ$ bends every $\frac{1}{4}$ the length of the pipe's diameter is presented.

4) Hindsight is the basis of the Examiner's rejection since the only motivation to modify Clavin's bends for $\frac{1}{4}^\circ$ bends every $\frac{1}{4}$ the length of the pipe's diameter is provided in Applicant's disclosure.

The Applicant's arguments are addressed as follows:

1) Applicant's arguments with respect to newly claimed limitations—"one of a" and "each of" in lines 3 and 9, respectively, which diverts the claim from multiple heaters as previously claimed as "placing a heater proximate to a plurality of longitudinally displaced locations"—have been considered but are moot in view of the new ground(s) of rejection.

1) The interpretation of Claim 1's term "placing a heater proximate to a plurality of longitudinally displaced locations" is recited in page 2 of the Office Action mailed 31 March 2009:

Although multiple bends are within the scope of the Claim and within the scope of the Specification as originally filed (see Claim 3 as originally filed and [0010]), the scope of instant Claim 1 includes having multiple heaters, which is not disclosed in the Specification as originally filed.

1) To clarify, each longitudinal location was understood to have at least one heater—"a heater." The interpretation did not require each longitudinal location to have multiple heaters.

2) Smith's composite reinforced metal pipe includes carbon fiber, fiberglass, or filaments (reinforcement fibers) bound in polymeric resin (resin) (see [0015]).

3) It is noted that Applicant does not contest the motivation for using Lewis's bend increments in Smith's pipes as cited on page 4 of the Office Action mailed 31 March 2009:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Lewis's bend increments with Smith's pipe bending because Lewis teaches that $\frac{1}{4}^\circ$ bends can incrementally achieve the larger overall arc desired to be obtained (see Lewis, col. 9, paragraph [0029] and col. 10, paragraph [0031]).

4) Lewis is relied upon to teach achieving cumulative bends with spaced $\frac{1}{4}^\circ$ bends (see col. 9, paragraphs [0029] and col. 10, paragraph [0031]). Thus, the 1° bend

of Clavin would be replaced with spaced $\frac{1}{4}^\circ$ bends over the same length. Thus the combination would meet the claimed requirements as recited on pages 3, 4, 8, and 9 of the Office Action mailed 31 March 2009:

Clavin teaches bending at a location then continuing bending at another location (placing a heater proximate to a plurality of longitudinally displaced locations) (see col. 4, lines 20-42). Clavin teaches twelve-inch diameter pipes (see col. 2, lines 50-55) and bending 1° per arc foot (see col. 5, lines 3-5), which would be 1° of longitudinal length equal to a diameter of the CRP.

Lewis teaches achieving cumulative bends with spaced $\frac{1}{4}^\circ$ bends (see col. 9, paragraphs [0029] and col. 10, paragraph [0031]).

In view of Clavin, the spaced $\frac{1}{4}^\circ$ bends would be $\frac{1}{4}$ of the 1° arc length, and the $\frac{1}{4}$ of the bend would be spaced $\frac{1}{4}$ diameter of the pipe (bending the pipe incrementally at the plurality of longitudinally displaced locations, the longitudinally displaced locations separated by a distance equal to approximately $\frac{1}{4}$ of the diameter of the pipe).

4) In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a

reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mon.-Thu. 7:30 a.m.-5 p.m. and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/P. B./
Examiner, Art Unit 1791

/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1791